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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/801,614	03/16/2004	Deok-Hyung Lee	5649-1272	2903

7590 02/10/2006

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EXAMINER	
DICKEY, THOMAS L	
ART UNIT	PAPER NUMBER
2826	

DATE MAILED: 02/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action Before the Filing of an Appeal Brief	Application No. 10/801,614	Applicant(s) LEE ET AL.	
	Examiner Thomas L. Dickey	Art Unit 2826	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 03 January 2006 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:
   a) ☐ The period for reply expires _____months from the mailing date of the final rejection.
   b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

   Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
   (a) ☒ They raise new issues that would require further consideration and/or search (see NOTE below);
   (b) ☒ They raise the issue of new matter (see NOTE below);
   (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: *See Continuation Sheet*. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☐ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
   The status of the claim(s) is (or will be) as follows:
   Claim(s) allowed: _____.
   Claim(s) objected to: _____.
   Claim(s) rejected: *1-7 and 13-20*.
   Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☐ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: _____.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). _____
13. ☐ Other: _____.

Thomas L. Dickey
Patent Examiner
Art Unit 2826

Continuation of 3. NOTE: Whether the punch-through stop region is confined laterally to beneath the channel region (from applicants' remarks it appears that they intend to claim only those punch-through stop regions that are formed below the channel and that, when viewed from above the channel, have a footprint that lies completely within the footprint of the channel. However, this may too narrow a reading to be properly applied to the actual words of the claim) is an issue requiring further consideration and search. Further consideration would first need to be concentrated on determining the broadest reasonable meaning of the phrase "confined laterally to beneath." This phrase at first glance reads like an oxymoron.

If (as applicants imply in their remarks) the requirement of lateral confinement of the stop region to beneath the channel is read to require the punch-through stop region to be formed below the channel and also, when viewed from above the channel, to have a footprint that lies completely within the footprint of the channel, the issue of new matter may be raised. In the application as filed, "punch-through" is mentioned in exactly four paragraphs. In paragraph 0004 applicants warn that short-channel devices may have undesirable punch through, in paragraph 50 applicants report that sometimes, such as in SOI FINFETS, there is really no need to worry about punch-through. In paragraph 0032 applicants disclose that punch through may be prevented by a punch-through stop layer 62a, that may doped to a higher concentration than region 64. Finally, in paragraph 0042, applicants disclose that implanted layer 62 overlaps region 64 to form punch-through stop layer 62a. Nowhere do applicants disclose in writing that the punch-through stop region, when viewed from above the channel, has a footprint that lies completely within the footprint of the channel.

In figure 2B the edges (in the channel width direction) of the lateral footprint of punch-through stop layer 62a line up with the edges of channel 64. However, this appears to be a purely coincidental result of the draftsman's drawing of the edges of region 64 to line up with the edges of isolation layers 56. It appears that in the channel width direction the edges of punch-through stop layer 62a are actually aligned with the edges of isolation layers 56.

In figure 2A the edges (in the channel lenth direction) of stop layers 62a are clearly rounded or "smeared" to include regions located below source and drain regions 76s and 76d. This is only to be expected, given the implantation method which forms regions 62a, 76s, and 76d, as described by applicants in paragraphs 0038 through 0042 and illustrated in figures 5-8.